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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Igor Stagljär

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46002 7590 10/13/2010

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EXAMINER

JOIKE, MICHELE K

ART UNIT

PAPER NUMBER

1636

MAIL DATE

DELIVERY MODE

10/13/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/509,507	<b>Applicant(s)</b> STAGLJAR ET AL.	
	<b>Examiner</b> Michele K. Joike	<b>Art Unit</b> 1636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 48-81 is/are pending in the application.
- 4a) Of the above claim(s) 69 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 74 is/are allowed.
- 6) ☒ Claim(s) 48-68, 70-73 and 75-81 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 48-81 are pending in the instant application. Claim 69 is withdrawn; claims 48-68 and 70-81 are examined. Any rejection of record in the previous Office Action, mailed February 4, 2010 that is not addressed in this action has been withdrawn.

Because this Office Action only maintains rejections set forth in the previous Office Action and/or sets forth new rejections that are necessitated by amendment, this Office Action is made FINAL.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 70 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 68, the method is drawn to identifying compounds by screening the compounds for their ability to interfere with protein interaction. However, in claim 70, the compounds used in the screening are ligands of orphan receptors. The specification states in paragraph 261, that “[s]o-called orphan receptors are GPCRs for which no endogenous ligand has been identified.” Therefore, it is unclear how unknown compounds can be used to screen for protein interaction. This rejection is necessitated by amendment.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 48-55, 57-62 and 64-67 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Stagljär in view of US 6,251,676 and US 2005/0277116.

Claim 68 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Stagljär et al, US 2005/0277116 and US 6,251,676 as applied to claims 48-55, 57-62 and 64-67 above, and further in view of Ehrhard et al.

Claim 56 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Stagljär et al, US 2005/0277116 and US 6,251,676 as applied to claims 48-55, 57-62 and 64-67 above, and further in view of Wedegaertner et al and Friedberg et al.

Claims 63, 75 and 76 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Stagljär et al, US 2005/0277116 and US 6,251,676 as applied to claims 48-55, 57-62, 64-67 above, and further in view of Mumberg et al.

Claims 63, 75 and 77 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Stagljär et al, US 2005/0277116 and US 6,251,676 as applied to claims 48-55, 57-62, 64-67 above, and further in view of Ecker et al.

Claims 71-73 and 78-71 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Stagljär et al, US 2005/0277116 and US 6,251,676 as applied to claims 48-55, 57-62, 64-67 above, and further in view of Clarke et al.

These rejections are maintained for reasons of record and as discussed below.

***Response to Arguments Concerning Claim Rejections – 35 USC § 103(a)***

Applicant's arguments filed August 2, 2010 have been fully considered but they are not persuasive.

The following grounds of traversal are presented:

Applicants argue that there would be two types of Wbp1 in the cell, one that is tagged and one that is not. The two would compete, which would substantially compromise the sensitivity of Stagljär's assay. The interference this would cause for analyzing the interactions between membrane proteins renders Stagljär unsatisfactory for its intended purpose.

Shioda teaches that its plasmid can be readily recovered from a mammalian cell, not a bacterial cell. However, Stagljär works with yeast cells. The office has not clarified how the specific teachings of Shioda's system can be readily applied to the teachings of Stagljär's yeast system. Also, Shioda states that integration of the vector is preferable. Therefore one of skill in the art would be taken aback by the notion that Shioda considers integration of the bait vector a preferred embodiment.

Clarke indicates that integration into the yeast chromosome would increase mitotic stability even more.

Lastly, the other references cited do not remedy the deficiencies of Stagljär, Mckeon and Shioda.

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These arguments are not found persuasive for the following reasons.

The fact that two different plasmids would compete does not make the design inoperable. The tagged Wbp1 is available for protein interaction. It does not have to be the only Wbp1 present.

Shioda is used to teach studies of protein-protein interaction using episomal plasmids. It is well known in the art that protein-protein interactions can be studied in a variety of cells. Applicants claim use of a bacterial, yeast or mammalian cell, while only limiting the protein to be a membrane protein. Furthermore, while Shioda does teach use of a mammalian cell, it also teaches "[s]ince the prey plasmid is maintained episomally in a closed circular form, the prey plasmid can be readily introduced and recovered from a bacterial host cell." (2<sup>nd</sup> paragraph of the summary of invention, emphasis added.) Also teaching a preferred embodiment does not negate teaching of other embodiments. Since Shioda teaches that plasmids in episomal form can be readily recovered, there is motivation to use episomal plasmids.

Plasmids are generally less stable than chromosomes, and one of skill in the art would know that. However, Clarke also teaches that CEN/ARS plasmids greatly increase mitotic stability. Having any vector integrate creates more stability, whether it is a bait or prey vector. Clarke is not used to teach the desirability of plasmids, but the desirability of using a CEN/ARS plasmid over other plasmids.

As just discussed, there are no deficiencies to remedy.

***Allowable Subject Matter***

Claim 74 is allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michele K. Joike whose telephone number is (571)272-5915. The examiner can normally be reached on M-F, 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on (571)272-0951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michele K. Joike/  
Primary Examiner, Art Unit 1636

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Primary Examiner  
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